

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2007-XXXX

WASTE DISCHARGE REQUIREMENTS  
FOR  
SK FOODS  
LEMOORE TOMATO PROCESSING FACILITY  
KINGS COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. SK Foods, a California corporation (hereafter known as Discharger), submitted a Report of Waste Discharge (RWD) dated 16 October 2006 to obtain revised Waste Discharge Requirements (WDRs) for the discharge of tomato processing wastewater at the SK Foods, Lemoore facility. The Discharger proposes to increase the flow from 2.5 to 4.5 million gallons per day (mgd) and to recycle the wastewater on about 2,600 acres of agricultural land that is about 5 miles southwest of the tomato processing facility.
2. The SK Foods tomato processing facility is on 19th Avenue southwest of Lemoore in Kings County approximately 0.8 miles east of Highway 41. The proposed discharge area is on 2,600 acres approximately 5-miles southwest of the processing facility in Sections 2, 3, 10, and 11, T20S, R19E, MDB&M, as shown on [Attachment A](#), which is attached hereto and made a part of this Order by reference.
3. Waste Discharge Requirements (WDRs) Order No. 98-167, adopted on 24 July 1998, restricts the monthly average discharge flow to 2.5 mgd. The WDRs prescribe effluent limitations on a monthly average basis for 5-day biochemical oxygen demand (BOD<sub>5</sub>) and dissolved oxygen (DO).
4. The purpose of this Order is to rescind WDRs Order No. 98-157 and prescribe requirements that reflect the Discharger's Wastewater Expansion Project.
5. The RWD presents information on site conditions, the existing tomato processing facility, wastewater quantity and quality, and the conceptual design of the Expansion Project. [Attachment B](#), which is attached hereto and made a part of this Order by reference, depicts the process flow of the existing processing plant and the discharge.

**Existing Discharge of Wastewater**

6. SK Foods processes over 750,000 tons of tomatoes annually. Tomatoes enter the facility and are processed in the "Bulk" or "Fresh Pack" process line from which bulk dice and paste are manufactured. A portion of the Bulk process line is sent to the "Food" process line for remanufacturing.

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7. The “Bulk” or “Fresh Pack” process line typical operates from the first week of July through early October. The average flow rate of the Bulk line is about 1.7 mgd with a minimum of about 615,000 gallons per day and a maximum of about 2.58 mgd. A summary of the wastewater quality generated from the Bulk process line from 2001 through 2006 is summarized in the following table.

**Bulk (Fresh Pack) - Wastewater Quality**

<u>Constituent</u> <sup>1</sup>	<u>Units</u>	<u>Average Concentration</u>	<u>Range of Concentration</u>
Electrical Conductivity	micromhos per centimeter	1,142	850 – 1,500
pH	pH Units	6.38	5.3 – 7.5
Total Alkalinity	milligrams per liter (mg/L)	92	2 – 290
BOD <sub>5</sub>	mg/L	1,315	25 – 3,000
Nitrate as Nitrogen	mg/L	0.3	0.1 – 1.3
TKN	mg/L	63	5 – 180
Total Nitrogen	mg/L	63	3 – 180
Total Phosphorus	mg/L	12	0.5 – 18.0
TDS	mg/L	1,547	200 – 3,200
TSS	mg/L	803	90 – 2,400
Aluminum	mg/L	0.2	0.07 – 0.24
Boron	mg/L	0.7	0.5 – 1.4
Chloride	mg/L	73	47 – 100
Manganese	mg/L	0.1	0.04 – 0.2
Sodium	mg/L	128	120 – 140
Sulfate	mg/L	19	15 – 26

1. 5-day, 20°C biochemical oxygen demand (BOD), Total Dissolved Solids (TDS), and Total Suspended Solids (TSS).

8. The "Food" process line operates year round and produces a daily average flow of about 400,000 gallons and monthly flows of about 8 mgd. The Food process line wastewater has been historically discharged to the City of Lemoore's wastewater treatment plant, but the Discharger now proposes to discharge the Food process line wastewater to the 2,600-acre Use Area. Effluent quality from 2002 through 2006 of the Food process line wastewater is summarized in the following table.

**Food (Retail) – Wastewater Quality**

<u>Constituent</u> <sup>1</sup>	<u>Units</u>	<u>Average Concentration</u>	<u>Range of Concentration</u>
Electrical Conductivity	Micromhos per centimeter	956	260 – 3,200
pH	pH Units	6.9	3.8 – 11.6
BOD <sub>5</sub>	Milligrams per liter	394	ND – 2,100

9. On average, the EC of the wastewater is about 600  $\mu$ mhos/cm higher than source water EC, but is four to five times less than the lowest EC recorded for the shallow groundwater beneath the Use Area.
10. To reduce the potential for nuisance conditions, the Discharger screens the wastewater with a 40 mesh, 0.02-inch spacing rotary screen and then aerates it in a holding pond before discharging the wastewater to the Use Area. Solid wastes screened from the wastewater (pomace and tomato culls) are utilized off-site as cattle feed. The wastewater is blended with irrigation water further reducing the potential for nuisance conditions and the wastewater is applied at rates that do not allow standing water for periods of greater than 48 hours.

**Wastewater Expansion Project**

11. The Wastewater Expansion Project is planned for the next three to five years and will increase the flow of both product lines. The limiting factors for the processing plant were the acreage required for disposal of the wastewater and the ability to pump the wastewater to the Use Area, not the plant's operational capacity. The additional acreage and the new and modified pipelines are proposed to meet the requirements. The proposed daily flow limit for the Food or Retail process line is 500,000 gpd, while the proposed average daily flow limit for the Bulk process line is 4.5 mgd.
12. The wastewater for both lines will be conveyed to the 2,600-acre Use Area via a series of pipelines. An existing 12-inch line is present heading south from the facility along 19<sup>th</sup> Avenue, then heading west along Jackson Avenue. The Discharger has added a new

pipeline segment south from Jackson Avenue and 21<sup>st</sup> Avenue to Kent Avenue, and then west along Kent and under the Kings River to the 2,600-acre Use Area. The new pipe discharges into an irrigation ditch that can supply the entire 2,600-acre Use Area. More pipeline improvements are planned for 2008 to allow the Discharger to increase its flows to 4.5 mgd.

13. It is anticipated that effluent mineral and metals quality characterized in [Findings 7 and 8](#) for the existing discharge will be similar to the effluent quality resulting from the Expansion Project.
14. During the first phase of the project, approximately 2.5 mgd of wastewater will be generated and spread on approximately 70 acres per day, over a ten-day irrigation cycle on a total of 700 acres. During future phases, after the pipeline from the tomato plant is upgraded, up to 4.5 mgd will be generated and discharged over the full 2,600 acres.
15. To assess the potential loading rates, the Discharger used wastewater characteristics based on average concentrations from 2006 effluent monitoring (BOD = 1,193 mg/L). Assuming a daily 4-inch depth of wastewater application (over an unspecified number of acres), the Discharger calculated maximum instantaneous (i.e., on the day of application) and cyclical BOD loadings to be 1,040 lb/ac and 104 lb/ac/day, respectively.
16. Given the estimated first-phase flow rate of 2.5 mgd, reuse area of 700 acres, irrigation cycle of ten days, and average concentrations from 2001 through 2006 (BOD = 1,315 mg/L), the instantaneous and cyclical BOD loadings would be approximately 390 lb/ac and 40 lb/ac/day, respectively. The loadings are less than calculated above because at 2.5 mgd, applying four inches daily on a ten-day rotation would mathematically reduce the size of the reuse area from 700 acres to approximately 260 acres. It is unlikely such higher loadings would be sustainable without creating nuisance conditions or without violating the effluent limits below (e.g., no standing water after 48 hours).

### **Water Recycling**

17. WDRs Order No. 98-167 incorporated water-recycling specifications to allow the Discharger to implement water recycling. The Discharger recycled wastewater to an 863-acre area to irrigate crops from 2001 through 2006. The Discharger began to recycle wastewater at the new 2,600-acre Use Area in July 2007. Typical crops have and will include alfalfa, corn (silage), and winter wheat.
18. Wastewater is pumped through a pipeline that discharges into a distribution canal present along the northern boundary of the disposal area. Several booster pumps and air valves are located along the length of the pipeline. The wastewater blends with canal/irrigation water in the distribution channel. The blended wastewater is then transferred to siphon ditches excavated along the western side of the fields and siphoned into rows as needed.

19. The blended wastewater is applied at plant uptake rates for both nutrient and hydraulic loading during the growing season. The canal water to wastewater ratio is at least one to one and often higher during the summer months to meet crop demands.
20. The Discharger reports that nitrogen will be applied to the soil at a rate of 113 pounds per acre per year (lb/ac/yr). The Discharger will grow winter wheat, alfalfa, and silage corn that have an annual plant uptake rate of 175 lb/ac, 480 lb/ac, and 250 lb/ac, respectively. The crops will require supplemental nitrogen fertilizer to maintain the crops.
21. Both recycling areas are in the ancestral lakebed for the Tulare Lake. Soils in the area are comprised primarily of the Lethent Clay Loam and lesser amounts of the Panoche Clay Loam. Both soils are saline-alkaline and have high pH concentrations of 7.8 or greater, which can restrict the growth of alkali sensitive crops. Addition of the acidic wastewater rich with organic constituents is beneficial to the alkali soils and results in the use of fewer soil amendments and the soil being compatible to growing a wider variety of crops.

#### **Site-Specific Conditions**

22. The processing plant and Use Area are in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 11 inches and 63 inches, respectively, according to information published by California Department of Water Resources (DWR).
23. Area soils are primarily the Lethent Clay Loam and the Panoche Clay Loam, according to the USDA Natural Resources Conservation Service. These soils are well drained, but saline to alkaline. Both soils are known to have high pH, and soils are typically treated with soil amendments (gypsum, sulfur, and acid forming fertilizers) to improve drainage, salinity, and excess alkali conditions.
24. The WWTF is not within a 100-year floodplain according to Federal Emergency Management Agency maps.
25. Land use in the WWTF vicinity is primarily agricultural and some industrial around the SK processing plant and the City of Lemoore approximately 5 miles to the northeast of the Use Area. The primary crops grown within five miles of the Use Area include field crops such as corn (silage), sorghum, sugar beets, and cotton and pasture crops such as alfalfa according to DWR land use data for Kings County published in 2003. Irrigation water is supplied primarily by groundwater.

#### **Groundwater Considerations**

26. Regional groundwater is contained generally in two aquifers, the Lower Confined Aquifer and the Upper Unconfined Aquifer. The two aquifers are separated by a confining layer

(Corcoran Clay or E Clay) present beneath the Use Area at about 450 to 500 feet bgs and is reported to be 80 to 100 feet thick in this area.

27. Although hydraulic continuity between aquifers is restricted, some agricultural wells within the vicinity are likely screened within the upper and lower aquifers to maximize well production. This uppermost layer has the potential to have hydraulic continuity between the two aquifers resulting in lower quality water from the uppermost aquifer to migrate into the higher quality aquifers just above and below the E-clay.
28. The City of Lemoore obtains its source water from several deep groundwater wells. The source water is of good quality as indicated by the City's 2005 Annual Water Quality Report. Elevated concentrations of uranium in groundwater have resulted in the City drilling additional wells to meet drinking water standards. Water used for processing operations is supplied by the City of Lemoore. A summary of the City's water quality is shown in the following table.

**City of Lemoore – Water Quality**

<u>Constituent</u>	<u>Units</u>	<u>Range of Concentration</u>
Aluminum	micrograms per liter (ug/L)	110 – 720
Arsenic	ug/L	6 – 25
Chromium	ug/L	not detected (ND) to 2
Calcium	milligrams per liter (mg/L)	0.5 – 1.7
Magnesium	mg/L	ND – 0.2
Sodium	mg/L	59 – 170
Hardness	mg/L	1.2 – 5.1
pH	pH Units	8.7 – 9.2
Total Dissolved Solids	mg/L	170 – 470
Electrical Conductivity	Micromhos per centimeter	250 – 730
Chloride	mg/L	3 – 68
Sulfate	mg/L	0 – 6.0

29. According to the California Department of Water resources, shallow groundwater in the area is unconfined. First encountered groundwater is encountered at 5 to 15 feet bgs and is of poor quality. A deeper groundwater zone is present within the unconfined aquifer with water depths reported to be about 85 to 145 feet bgs. The quality is reported to be good with EC values ranging from about 600 to 1,200 umhos/cm.
30. The Discharger's groundwater monitoring network is shown in [Attachment C](#), which is attached hereto and made a part of this Order by reference, and monitors the perched or shallow groundwater zone of the unconfined aquifer. The network was constructed in 2007 and consists of 11 shallow groundwater monitoring wells: three generally upgradient (MW-1 through MW-3), four (MW-4 through MW-8) in the central portion of the Use Area, and three downgradient wells (MW-9 through MW-11) along the eastern border of the 2,600-acre Use Area. Additionally, seven piezometers (P-1 through P-7) were already present as shown on [Attachment C](#), and will be used to record groundwater elevation data in conjunction with collecting samples from the wells for chemical analysis.
31. Groundwater elevation data obtained in January and March 2007 monitoring events indicate depth to perched or first groundwater ranging from about 6 to 20 feet bgs and a flow direction to the east. Initially, wastewater will be applied only to the eastern half of the Use Area, and wells in the central portion of the Use Area (MW-4 through MW-8) will serve as background wells. When flows increase, wastewater will be applied to the western portion of the Use Area and the wells will then serve as point of compliance wells to assess potential impact to shallow groundwater due to the application of the waste water. The Discharger collected samples from the 11 wells in January and March 2007, before wastewater from the processing plant was discharged to the Use Area. The following table characterizes average concentrations of groundwater samples collected from the monitoring wells in January, February, and March 2007.

**2,600-Acre Use Area – Groundwater Quality Data**

<u>Well Number</u>	<u>Constituents<sup>1</sup></u>					
	<u>EC</u>	<u>TDS</u>	<u>NO<sub>3</sub> as N</u>	<u>Chloride</u>	<u>Sulfate</u>	<u>Sodium</u>
MW-1	26,500	30,500	35.5	990	19,000	7,900
MW-2	8,200	7,250	7.9	270	4,200	1,700
MW-3	15,500	15,000	17	690	8,900	3,900
MW-4	46,500	63,500	37	2,850	41,000	17,500
MW-5	20,500	20,500	18	1,135	12,800	5,800
MW-6	11,500	10,500	97	260	6,250	2,850

<u>Well Number</u>	<u>Constituents</u> <sup>1</sup>					
	<u>EC</u>	<u>TDS</u>	<u>NO<sub>3</sub> as N</u>	<u>Chloride</u>	<u>Sulfate</u>	<u>Sodium</u>
MW-7	27,500	32,000	17	965	19,500	8,700
MW-8	10,500	9,250	12.5	420	5,650	2,650
MW-9	7,750	7,100	0.73	530	3,850	1,450
MW-10	16,000	14,500	<0.2	1,750	7,100	3,950
MW-11	10,500	9,650	0.26	940	5,100	2,300
<u>Averages</u>	18,300	20,000	22	980	12,120	5,340

1. Units are in milligrams per liter for all constituents except electrical conductance (EC), which is reported in micromhos per centimeter. TDS = Total dissolved solids. NO<sub>3</sub> as N = Nitrate as nitrogen.

32. The data indicates the extremely poor quality of the perched groundwater and the spatial distribution of the results. Elevated concentrations are observed in both upgradient and downgradient wells. All EC, sulfate, and TDS concentrations exceed the recommended and upper secondary maximum contaminant limits (MCLs) for each constituent. Nitrate concentrations exceed the primary MCL of 10 mg/L in seven (7) of the 11 samples analyzed. Chloride concentrations exceed the recommended secondary MCL of 250 mg/L in all samples, and the upper secondary MCL of 500 mg/L in all but two (2) of the 11 samples. An MCL has not been established for sodium, but the reported concentrations significantly exceed the water quality limit for agriculture of 69 mg/L further limiting the use of the Perched Groundwater.

### **Basin Plan, Beneficial Uses, and Water Quality Objectives**

33. The Water Quality Control Plan for the Tulare Lake Basin, 2nd Edition, (hereafter Basin Plan) designates beneficial uses, establishes numerical and narrative water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates by reference plans and policies of the State Water Board. Pursuant to Section 13263(a) of the California Water Code (CWC), these waste discharge requirements implement the Basin Plan.

34. Water in the Tulare Lake Basin is in short supply, requiring importation of surface water from other parts of the State. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity existing to replace an existing uses or proposed use of fresh water with recycled water.



35. The WWTF is in Detailed Analysis Unit (DAU) No. 238 within the Tulare Lake Basin hydrologic unit. The Basin Plan designates the beneficial uses of groundwater in this DAU as municipal and domestic supply, agricultural supply, and industrial process and service supply.
36. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, requires waters designated as domestic or municipal supply to meet the MCLs specified in Title 22. The Basin Plan's incorporation of these provisions by reference is prospective, and includes future changes to the incorporated provisions as the changes take effect. The Basin Plan recognizes that the Regional Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
37. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Tastes and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.
38. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until a valley wide drain is constructed to carry salts out of the basin. Until the drain is available, the Basin Plan establishes several salt management requirements, including:
- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500  $\mu\text{mhos/cm}$ . When the source water is from more than one source, the EC shall be a weighted average of all sources.
  - b. Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.
- These effluent limits are considered best practicable treatment or control (BPTC).
39. Title 22 in Table 64449 B establishes recommended, upper, and short-term ranges for EC, TDS, chloride, and sulfate. The recommended and upper ranges are 900 and 1,600  $\mu\text{mhos/cm}$  for EC, 500 and 1,000 mg/L for TDS, and 250 and 500 mg/L for chloride and for sulfate, respectively.
40. The list of crops in [Finding 25](#) is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but is representative. Though salt and boron sensitive crops could potentially be grown in Class I soils, which make up

approximately 40% to 50% of the soils in the area (i.e., strawberries, onions, and beans) none of these crops were observed or reported as being currently grown in the area based on DWR land use maps.

### **Antidegradation**

41. State Water Resources Control Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
- The degradation is consistent with the maximum benefit to the people of the State;
  - The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives; and
  - The discharger employs BPTC to minimize degradation.
42. In general, shallow groundwater exceeds Water Quality Objectives for nitrate as nitrogen, EC, TDS, chloride, and arsenic. The discharge of tomato processing wastewater from the Lemoore facility will not degrade the beneficial uses of groundwater beneath the Use Area because the first encountered groundwater is not of high quality. The concentrations of the effluent ([Findings 7 and 8](#)) are less than the concentrations reported for background groundwater ([Finding 31](#)). EC and TDS concentrations in background groundwater are four to five times the EC and TDS concentrations of the effluent.

### **Treatment and Control Practices**

43. The proposed expansion described in [Findings 11 through 16](#), once completed, provides treatment and control of the discharge that incorporates:
- Screening at the plant before discharge to the Use Area to remove solids that are hauled offsite and used as cattle feed;
  - Application of wastewater at plant uptake rates for nitrogen and organic loading;
  - Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
  - Blending of wastewater with irrigation water to meet the agronomic requirements for crop growth; and
  - At least daily inspection of the Use Area during times of discharge.
44. This Order establishes groundwater limitations for the facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains

requirements for a groundwater assessment for assuring that the highest water quality consistent with the maximum benefit to the people of the State will be achieved.

45. According to Pollution Abatement in the Fruit and Vegetable Industry, published by the United States Environmental Protection Agency (US EPA Publication No. 625/3-77-0007) (hereafter Pollution Abatement), in applying food-processing wastewater to land for biological treatment, the loading of BOD<sub>5</sub> should not exceed 100 lbs/acre/day (as a cycle average) to prevent nuisance odors.

#### **Water Recycling Criteria**

46. State Water Board Resolution No. 77-1, Policy with Respect to Water Recycling in California, encourages recycling projects that replace or supplement the use of fresh water, and the Water Recycling Law (California Water Code Section 13500-13529.4) declares that utilization of recycled water is of primary interest to the people of the State in meeting future water needs.
47. The Basin Plan encourages recycling on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use or proposed use of fresh water with recycled water.

#### **Designated Waste and Title 27**

48. CWC Section 13173 defines designated waste as either:
- a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
  - b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions as a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the state contained in the appropriate state water quality control plan.
49. Release of designated waste is subject to full containment pursuant to the requirements of Title 27, CCR, Section 20005 et seq. (hereafter "Title 27"). Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the following conditions are met:
- a. The applicable regional water board has issued waste discharge requirements, or waived such issuance;
  - b. The discharge is in compliance with the applicable basin plan; and
  - c. The waste is not hazardous waste and need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

### CEQA

50. On 2 August 2007, the Regional Water Board adopted Resolution No. R5-2007-0106, which approved the Initial Study and adopted a Negative Declaration for the discharge/recycling of wastewater to an approximately 2,600-acre disposal area from the Discharger's Lemoore Tomato Processing Facility.
51. This Order implements measures necessary to mitigate any adverse impacts to groundwater from the Expansion Project to less than significant levels, including:
- a. [Effluent Limitation B.1](#), which restricts flow to 4.5 mgd;
  - b. [Discharge Specification C.3](#), which stipulates the wastewater will be blended with irrigation water to at least a 1:1 ratio; and
  - c. [Discharge Specification C.4](#), which stipulates waste constituents cannot be released or discharged in a concentration or mass that causes violation of the Order's groundwater limitations.

### General Findings

52. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
53. The Regional Water Board will review this Order periodically and will revise requirements when necessary.
54. California Water Code Section 13267(b) states that: "In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."
55. The technical reports required by this Order and the attached Monitoring and Reporting Program No. [R5-2007-XXXX](#) are necessary to assure compliance with these waste discharge requirements. The Discharger operates the Facility that discharges the waste subject to this Order.

56. The California Department of Water Resources set standards for the construction and destruction of groundwater wells, as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to California Water Code Section 13801, apply to all monitoring wells.

### **Public Notice**

57. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

58. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

59. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, Waste Discharge Requirements Order No. 98-167 is rescinded and that, pursuant to Sections 13263 and 13267 of the CWC, SK Foods and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

#### **A. Prohibitions**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, California Code of Regulations, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in California Water Code Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Application of treated wastewater in a manner or location other than that described herein is prohibited.

#### **B. Effluent Limitations**

1. The monthly average discharge flow shall not exceed 4.5 mgd.
2. Average BOD Loading to the Use Area shall not exceed 100 lbs/acre/day, both long-term and over the course of any discharge cycle (i.e., the time between successive applications).

### C. Discharge Specifications

1. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. Objectionable odors shall not be perceivable beyond the limits of the Use Area property at an intensity that creates or threatens to create nuisance conditions.
3. Application of waste constituents to the Designated Disposal Area shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the Designated Disposal Area, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.
4. Wastewater shall be blended with irrigation water (i.e., well water or canal water) at a minimum freshwater to wastewater ratio of 1:1.
5. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

### D. Use Area Specifications

1. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
2. No physical connection shall exist between tomato processing wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduce pressure principle device.
3. The Use Area shall be managed to prevent breeding of mosquitoes. More specifically:
  - a. All applied irrigation water must infiltrate completely within a 48-hour period;
  - b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and
  - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

### **E. Solids Specifications**

1. Any handling and storage of solids and sludge at the Facility or in the Use Area shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
2. Collected screenings, sludge's, and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
3. Any proposed change in solids use or disposal practice shall be reported to the Executive Officer at least 90 days in advance of the change.

### **F. Groundwater Limitations**

Release of waste constituents from any treatment or storage component associated with the WWTF shall not cause or contribute to groundwater:

- a. Containing concentrations of constituents identified in Title 22 in excess of the MCLs quantified therein, or natural background quality, whichever is greater; or
- b. Containing taste or odor-producing constituents, or toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.

### **G. Provisions**

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions(s).
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) No. [R5-2007-XXXX](#), which is part of this Order, and any revisions thereto as adopted by the Regional Water Board or approved by the Executive Officer. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger self-monitoring reports.
3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger shall not allow pollutant-free wastewater to be discharged into the Facility collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means



storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.

5. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of the Order.
6. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. To demonstrate compliance with sections 415 and 3065 of Title 16, CCR, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Regional Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Regional Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Regional Water Board office.
9. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of [Standard Provision B.3](#) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.



If approved by the Executive Officer, the transfer request will be submitted to the Regional Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

10. As a means of discerning compliance with [Discharge Specification C.2](#), the dissolved oxygen (DO) content in the upper zone (1 foot) of blended water in the irrigation canal should not be less than 1.0 mg/L. If the Discharger or the Regional Water Board receives odor complaints, the Discharger may be required by Regional Water Board staff to monitor the blended water for a period of time. Should the DO be below 1.0 mg/L, the Discharger shall report the findings to the Regional Water Board and propose a remedial approach to resolve the low DO condition.
11. By **1 January 2008**, the Discharger shall submit a Final Salinity Control Plan detailing all measures taken to reduce the salinity of the discharge, and documenting that all feasible salinity reduction measures have been implemented.
12. The pH of the discharge shall not be less than 4.5 or greater than 10 pH units for more than three consecutive 24-hour composite sampling events. In the event that the pH of the discharge is outside of this range for more than three consecutive sampling events, the Discharger shall submit a technical evaluation in its monthly SMRs documenting the pH of the blended discharge to the Designated Disposal Area, and if necessary demonstrate that the effect of the discharge on soil pH will not exceed the buffering capacity of the soil profile.
13. If the Regional Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_.

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

Order Attachments:

Monitoring and Reporting Program

A. Vicinity Map – SK Foods Lemoore

B. Process Flow Diagram – SK Foods Lemoore

C. Use Area Map with Monitoring Well Locations  
Information Sheet

Standard Provisions (1 March 1991) (separate attachment to Discharger only)

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WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2007-XXXX  
SK FOODS, LEMOORE TOMATO PROCESSING FACILITY  
KINGS COUNTY

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JSP 8/23/07

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